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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/695,435

10/28/2003

Gururaj Pangal

112-0123US

4461

29855

7590

04/21/2006

WONG, CABELLO, LUTSCH, RUTHERFORD & BRUCCULERI,

P.C.

20333 SH 249

SUITE 600

HOUSTON, TX 77070

EXAMINER

SUN, SCOTT C

ART UNIT

PAPER NUMBER

2182

DATE MAILED: 04/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/695,435	<b>Applicant(s)</b> PANGAL ET AL.	
	<b>Examiner</b> Scott Sun	<b>Art Unit</b> 2182	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 March 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

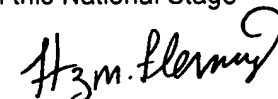
**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

  
**FRITZ FLEMING**  
 PRIMARY EXAMINER  
 GROUP 2100  
A42181  
4/14/2006

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/20/2006 has been entered.

### ***Double Patenting***

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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3. Claims 1, 9, 17, 25 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1, 10, 19, 28 of copending Application No. 10,695,408. Although the conflicting claims are not identical, they are not patentably distinct from each other because “data migration between first and second migration units” would be an obvious addition to one of ordinary skill in the art at the time of invention. The motivation for doing so would have been to increase flexibility in managing storage space.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Edsall et al (PG Pub 2003/0172149).

6. Regarding claim 17, Edsall discloses a network (SAN, figure 1B) comprising:

at least one host (hosts 144, 146) adapted to be connected to a switched fabric (switched fabric made up of switches 148, 150, 152; inter-switch links 154, 156; paragraphs 39, 40);

at least two storage units (storage devices 132-142) adapted to be connected to a switched fabric (switches 148, 150, 152; inter-switch links 154, 156);

a switched fabric (switches 148, 150, 152; inter-switch links 154, 156) connected to and coupling the at least one host and the at least two storage units (paragraph 39), the switched fabric comprising:

at least one switch (switches 148, 150, 152) for coupling to the at least one host and the at least two storage units; and

a storage processing device (port processing logic in the switches, shown in figure 3A; paragraph 53) coupled to the at least one switch and for coupling to the at least one host and the at least two storage units, where the host and the at least two storage units may be directly connected to the storage processing device or may be coupled to the storage processing device through the switch, the storage device including:

an input/output module (logic elements 302, 304, 306, 320, 322, 324) including processors to receive, operate on, and transmit network traffic (paragraph 53), and

a control module (virtual processor 308) coupled to said input/output module, said input/output module and said control module being configured to interactively perform virtualization of a storage unit (paragraph 54)

and one of snapshotting of data on a storage unit (point in time copying, paragraph 43), journaling of data being written to a storage unit (logging information; paragraph 43), or migrating data between first and second storage units whether the at least one host and the at least two storage units are directly connected to the storage processing device or are coupled through the switch.

7. Regarding claim 18, Edsall discloses the network of claim 17 and further discloses wherein said processors include a processor with a frame classification module (virtualization intercept switch 306), a virtual target task, and a virtual initiator task (paragraphs 40, 53). Examiner notes that Edsall teaches performing storage virtualization with the switched fabric (throughout reference). The switches with port processors communicate with the hosts as a target and communicate with the targets (storage devices) as a host. Accordingly, the logic in the switches that communicate with the storage devices are virtual initiator tasks; and the logic in the switches that communicate with the hosts are virtual target tasks.

8. Regarding claim 19, Edsall discloses the network of claim 17, and further discloses where said input/output module and said control module support a virtualization processor (virtual processor 308) including a virtual target (virtual address of target), a volume manager mapping block (virtual to physical mapping), and a virtual initiator (address of switch; paragraph 54).

9. Regarding claim 20, Edsall discloses the network of claim 19, and further discloses wherein said volume manager mapping block provides virtual block to physical block mappings (paragraph 54).

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10. Regarding claim 21, Edsall discloses the network of claim 19, wherein said processors include a processor with a frame classification module, a virtual target task and a virtual initiator task (see rejection for claim 18).

11. Regarding claim 22, Edsall discloses the network of claim 21, wherein said processor utilizes said volume mapping block and said virtual target task to translate received frames from a virtual target to a physical target (paragraph 54).

12. Regarding claim 23, Edsall discloses the network of claim 22, wherein said processor utilizes said virtual initiator task to transmit frames to the physical target and receive response frames from the physical target (paragraph 53, 54; also see rejection for claim 18).

13. Regarding claim 24, Edsall disclose the network of claim 23, wherein the virtual target translates to two physical targets (mirroring; paragraph 64) and whrein said processor utilizes said virtual target task to prepare a command frame for the second physical target and said virtual initiator to transmit said command frame to the second physical target (paragraph 54).

14. Claims 1-16 and 25-32 are substantially similar to the above claims. The same rejections are applied.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Sun whose telephone number is (571) 272-2675. The examiner can normally be reached on M-F, 10:30am-7pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim N. Huynh can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SS  
4/12/2006

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